

***"You can run the Hydroject as often as you like, and the players don't know the difference"***

***— Cliff Frink  
Legend Trail Golf Club***

aerify while the course is open. That's a big advantage."

Legend Trail uses traditional core aerification and other aerating tools as well, but Frink relies on his Hydroject, especially on greens.

"We probably run it three to four days a week," he says. "Frequency is the key. The number-one reason for green failure is poor gas exchange below the surface. In our particular situation, the Hydroject opens up more air pores, allowing the greens to breathe and creates channels for root growth. I believe it is a valuable tool to help combat sodium buildup as well."

"To me, the Hydroject is a very valuable piece of equipment, especially on greens," agrees Dr. Duncan. "With the Hydroject you keep the macro-pores open and keep oxygen and salts moving down through the profile. And there's virtually no disturbance of the putting green surface. That's the beauty of that implement."

### **The Brink Of Extinction**

The Hydroject concept isn't really new, though. Toro actually introduced the original Hydroject aerator more than ten years ago. In fact, Superintendent Frink was one of the product's earliest users.

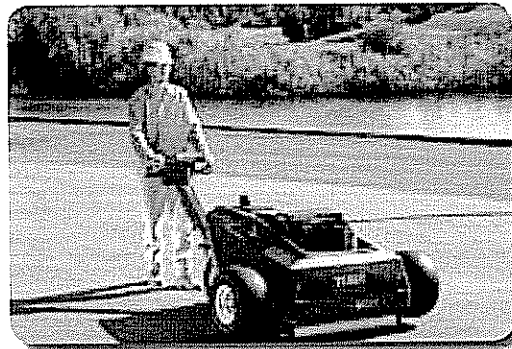
"When the Hydroject came out, it was considered one of the most innovative turf products ever," recalls Tony Ferguson, Senior Marketing Manager for Cultivation Products at Toro. "The idea of creating a hole without pulling a plug was revolutionary at the time, plus it could go much deeper than traditional aeration. Here was a greens aerator that could aerate to

eight inches and penetrate through a pan layer...that was really something."

However, the company that manufactured the engine for the Hydroject discontinued their product, and Toro had to make a decision.

"We were faced with obsolescence, or redesigning it with a different engine," Ferguson explains. "We determined we would no longer make the Hydroject."

When that news got out, the industry reacted immediately. Phone calls, letters and personal appeals came into Toro from superintendents, the USGA, distributors,



The Toro® Hydroject® uses water injection as deep as 8" to loosen and provide oxygen to the soil

university professors and other turfgrass professionals, all urging the company to keep the Hydroject.

"I was one of the people that went straight to them," says Dr. Duncan. "We told them this was an essential tool, one that was going to become even more important as water quality declines and salinity in irrigation water increases. We beat that drum pretty hard."

### **New And Improved**

As a result of so much positive feedback, Toro moved ahead with a redesign. Now the upgraded unit is even better than the original. With added versatility and flexibility, this new multi-dimensional Hydroject is easier to use and provides increased horse power. It offers four spacing control settings ranging from 1.5" X 3" to 3" X 6"; depending on spacing and speed, an experienced operator can aerate up to 26,000 square feet/hour.

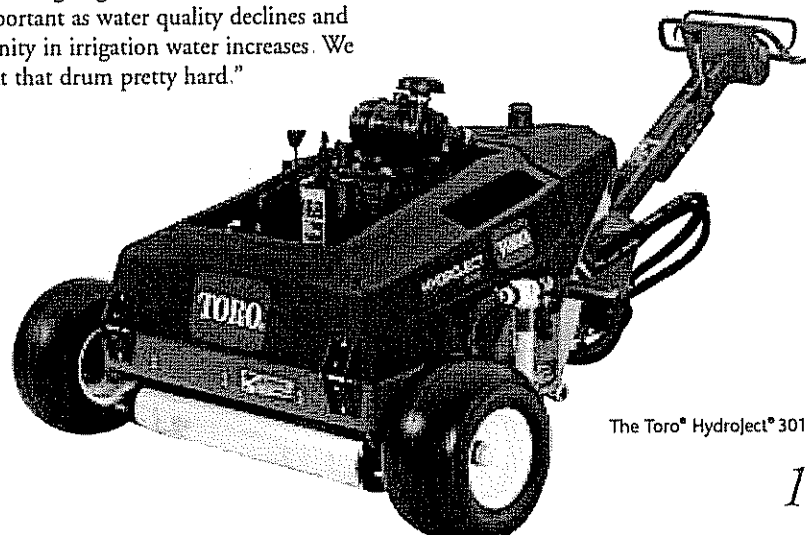
"We'll do three or four greens every morning," says Frink. "It's an easy machine to run. It's a one-man operation and there's no cleanup involved. If we could, I would probably Hydroject my greens twice a month."

"Another big use of Hydroject is treating localized dry spots on greens," adds Dr. Duncan. "If you don't want to treat the whole green, just go in and treat those problem areas in a quick job. That will open them up and start getting them hydrated again and the grass will come back."

So now in addition to all the reasons why to aerate, Toro's Hydroject gives you another great option for where, when and how to do it effectively.

"If you live and die by your greens and have challenging irrigation water issues, then the Hydroject is a critical tool," concludes Duncan, "and you don't lose the integrity of that putting surface."

*For more information about the Hydroject, visit [toro.com/hydroject](http://toro.com/hydroject)*



The Toro® Hydroject® 3010




## Using Hydroject® To Control The Risks Of Soil Salinity

**T**oro's amazing new Hydroject® 3010 water-injection aerator enables you to aerify putting greens more frequently than ever before, because Hydroject doesn't disrupt the playing surface. By shooting fine blasts of pressurized water into the soil—instead of pulling cores—the thin, stainless steel nozzles of the Hydroject create virtually invisible pores. There's also no cleanup required, so the whole process goes very quickly.

Because the Hydroject gives you so much flexibility in usage timing, you can aerate greens whenever you want, or as often.

Ron Duncan, Ph.D., developer of several salt-tolerant Seashore Paspalum turfgrass cultivars and now an independent consultant for water challenges on turfgrass, says effective timing of aeration depends on three main variables: soil profile conditions, age of the greens, and the level of salts coming in with irrigation water.

To evaluate a turfgrass situation, Dr. Duncan recommends tissue, soil and water analysis to determine the total salt impact on the ecosystem. Salt is naturally bad for the overall health of turfgrass, and at high levels, it can actually steal

water away from the plant's roots.

"Salinity changes everything," explains Dr. Duncan. "Salts can build up to a level where they just desiccate those roots. Or salts will start sealing that soil surface and reduce oxygen. If you reduce oxygen to Bermudagrass or bentgrass roots, they will die. Then the turf loses density, the putting quality goes down and soon you've got major putting surface complaints from the golfers. The key then is to keep the macro-pores open and keep those salts moving through the profile, and keep oxygen going down," he says.

"If someone already has a salt problem, I put them on weekly or bi-weekly aeration program, at least initially, to start moving the salts down. Then implement a regular aeration maintenance schedule at least monthly depending on the site-specific conditions," he continues. "If you have effluent type irrigation water resources, which may or may not have high salt levels, then it changes your management decisions concerning aeration frequency. And increasingly bad water quality just escalates the challenges in trying to maintain acceptable turf performance, especially on greens with low mowing heights."

To counteract salinity and prevent those damaging effects, Dr. Duncan recommends the Toro Hydroject.

"That's where this implement comes in," he says. "I regularly put people on a Hydroject program for greens when they have the equipment as a way to manage salts and not compromise the surface integrity on that green. The aerification application is not invasive, so you accomplish what you need to do to keep salts moving, without affecting the putting surface."

Pencil tines work similarly, but not as deeply as Hydroject, which reaches down a full 8". Also, most aerators with pencil tines are heavier than a Hydroject unit, which makes compaction worse. Because the Hydroject is so lightweight and easy to operate, it's no trouble to aerate a large green in an hour.

"You always have to fit aeration to site-specific situations," concludes Dr. Duncan. "You may have to do it monthly, or if you've got high salts in your irrigation water, it may be every week or every other week. The point is to understand that you don't just do this once or twice a year."



# Technician tips

Customer Care Available at [toro.com/golf](http://toro.com/golf) and [toronsn.com](http://toronsn.com)

## Preventive Maintenance Assures HydroJect® Productivity

**T**he new HydroJect® 3010 water-injection aerator from Toro offers you a much greater level of flexibility in a greens-aerifying program. The unique HydroJect unit forces high-pressure water (5000 psi, 344.8 bar) deeply into the turfgrass subsoil through narrow, stainless-steel nozzles. That aerates the turf without the need to clean up pulled cores, and keeps golfers happy by not affecting the playing surface of a green.

Aerating with a blast of water instead of a tine offers many advantages; the fact that it uses water also means different maintenance practices will be helpful in promoting maximum life and productivity for your HydroJect.

"Out here in the desert, we're dealing with effluent water," explains Cliff Frink, Golf Course Superintendent at the high-end Legend Trail Golf Club in North Scottsdale, Arizona. "It's really poor water quality. In our particular situation, we use the HydroJect to help manage the salt build up (from the low-quality water)."

To minimize the risk of corrosion from that high-saline water, it's important to regularly check the HydroJect's water pump, valve housings and accumulator—the nitrogen-charged water energy storage device—and replace them as needed. Also, corrosion can affect plugs and electrical fittings, so caution is advised in those areas as well.

"It helps to change the nozzles pretty frequently and always make sure they are new," Frink says. "If the spring and the ball and the nozzle are pitted, you're going to lose pressure in the head."

Frink also suggests installing pre-filters on the hose line. "At a course I worked on in the past, we had algae that would come from the irrigation pond, and we used pre-filters to help keep it clean. I think that made a difference."

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Other beneficial recommendations from Superintendent Frink and his maintenance staff are to diligently bleed the air out of the lines to avoid bubbles forming in them, and to keep the unit greased.

To optimize greens-aerification with the HydroJect, one of the key guidelines is more operational than mechanical: Always aerate on a regular basis, and then vary the

nozzle spacing and aerating patterns you use from one operation to the next.

"It's all about frequency, and the more you can do it the better you'll be," Frink says emphatically. "This isn't a one-shot deal. If you're going to do it, do it twelve times or don't do it at all."

Frink refers to his aerating program as "a commitment," but he quickly adds that it's well worth it.

"I wouldn't do it if I wasn't seeing results," he says. "We do see the results in improved root growth. It's why we continue to use it. I believe this is one of the keys for maintaining bentgrass in our desert climate." ■



Cliff Frink of Legend Trail Golf Club recommends changing nozzles on the HydroJect® frequently.

**TORO.****Options & Attachments**

## New Toro Fairway Groomers

### *The Perfect Attachment For Clean-Cut Fairways*

**W**hen you get a haircut, the barber or stylist typically stands your hair straight up in order to cut it. This helps the stylist achieve an even length and therefore provides a more uniform cut. This same idea has now been applied to fairway mowing with the new groomer attachment to Toro's Reelmaster® 5500, 6500 and 6700 fairway mowers.

#### Go Without The Grain

The new groomer actually spins in the same direction as the roller and reel, but at a higher velocity. It stands the turfgrass upright immediately before it's cut for a cleaner, more uniform cut.

"The front roller will roll down the grass and it takes a while to rebound and spring back up," says Tony Ferguson, Toro's Senior Marketing Manager for Reelmasters. "These groomers assist in that rebound process, but also go a step further by reducing the grain in grass."

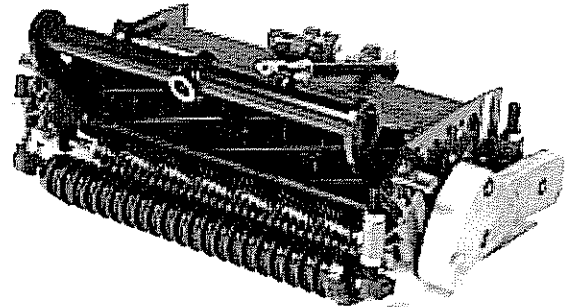
Grain has to do with the grass all laying or growing sideways in one direc-

tion, making it more difficult to cut. Some cultivars such as Bermudagrass and Bentgrass naturally exhibit grain because they tend to grow horizontally. Lifting the grass blades with the groomer before cutting reduces that grain, resulting in a nice consistent after-cut appearance.

The enhanced quality of cut while mowing improves after-cut appearance and provides a truer, more consistent playing surface, according to Ferguson. "Similar to greens groomers, Toro's new fairway groomers improve the appearance and playability of fairways by enhancing turf health and providing consistent conditions for golfers," he says.

#### Better Clipping Dispersion

As an added benefit, the fairway groomer knocks off morning dew to minimize grass clumping and also helps with clipping dispersion. When used in tandem with Toro's powered rear roller brushes,



which sweep the rear rollers while mowing, grass clumping is further reduced. An optional basket kit can even be used to collect the clippings.

In addition, the groomer cuts some of the stolons and runners, enabling re-rooting and regenerative grass growth. And when set at the full depth of 3/16" below the height of cut, the groomer can also aid in controlling thatch.

"It really isn't a verticutter or de-

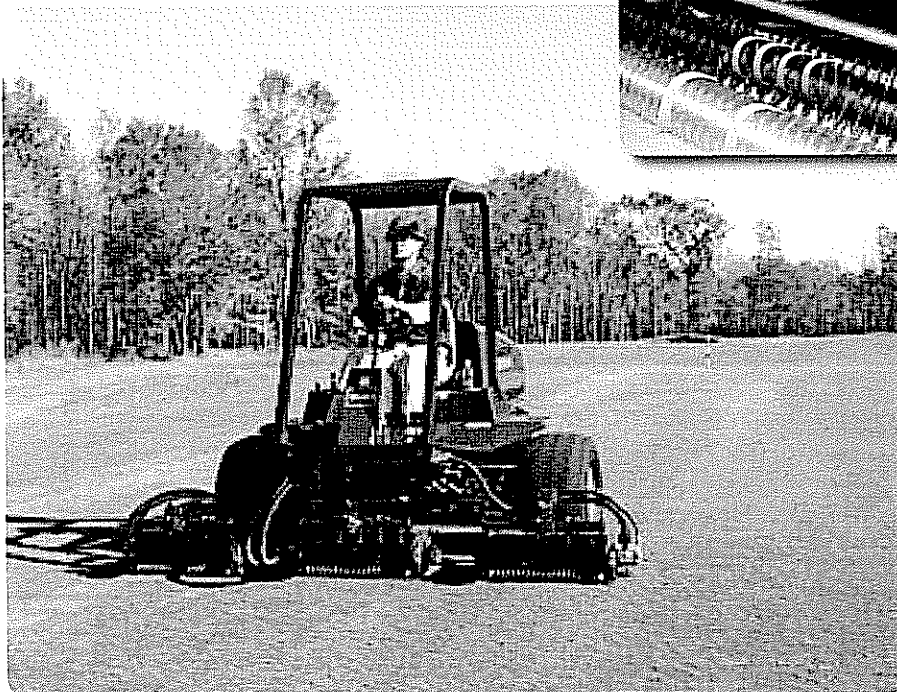
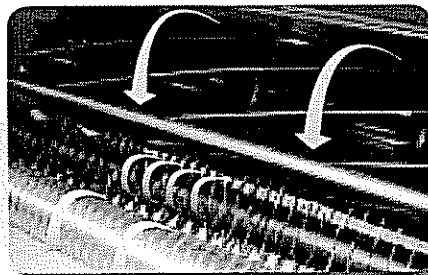
thatcher per se because it doesn't get deep enough into the grass," Ferguson explains. "However, it does provide an ancillary benefit by getting down there slightly below the height of cut."

Available in 2005, the fairway groomers will be on display at the 2005 Golf Industry Show in Orlando. The superintendents who have pre-

viewed the new unit have only good things to say.

"Feedback on the new fairway groomers has been very positive," concludes Ferguson. "One customer stated that his fairways have never looked better in over 20 years of managing his course."

The new fairway groomer attachment is available for 7" (17.7 cm) diameter cutting units (Part No. 03860, 03861 and 03862) produced since 2000. For more information, contact your Toro distributor or visit [toro.com](http://toro.com).



The new Reelmaster fairway groomers spin at a higher velocity than the roller and reel (inset) which stands the turf up before cutting to reduce grain and provide a more uniform cut



# TORO for you

## Combining Forces

### *Toro Support Helps All Involved In New Golf Industry Show*



Toro has a long history of supporting the golf industry, and plans to continue this commitment through the GCSAA and NGCOA

**T**he golf industry is changing. As superintendents take on more business responsibilities, it is critical that the lines of communication with facility management and ownership are clear and unfettered. The Golf Course Superintendents Association of America (GCSAA) and the National Golf Course Owners Association (NGCOA) have recognized this need and as a result, these industry associations, along with the Golf Course Builders Association of America (GCBA) and the American Society of Golf Course Architects (ASGCA), are collaborating for the 2005 Golf Industry Show in Orlando, Florida, February 10-12, 2005.

#### Common Interests

A joint show will provide a forum for addressing key issues which are important to all parties. From golf course design and construction to operation, the show's educational and networking opportunities will benefit everyone involved—and help bring two vital parties to the same table in order to shape the future of the golf industry.

"There are many shared interests among owners, builders, architects and superintendents. The Golf Industry Show will be an efficient and effective means to bring those professionals and indus-

try representatives together," says Steve Mona, CEO of the GCSAA. "We think the Golf Industry Show will create a greater understanding and appreciation for the sophisticated nature of the golf course management profession."

In addition to increased exposure, this new show will provide an opportunity for owners and superintendents to collaborate for the good of their facilities.

"The Golf Industry Show will allow superintendents and owners to jointly discover solutions to common challenges," says Mike Hughes, Executive Director of the NGCOA. "This new show will allow us to provide a big picture perspective of the industry that will benefit our membership and other supporters."

#### Industry Counts On Toro

Toro is very familiar with both organizations and the members they serve. With a long history of supporting both associations, Toro has gone the extra mile to provide solutions for all aspects of the golf industry.



Steve Mona, CEO, GCSAA

"The GCSAA appreciates the support it receives from companies such as Toro," says Mona. "From sponsoring the GCSAA Golf Championship each year to the company's various industry support initiatives, Toro has clearly demonstrated its concern for our members and the golf industry as a whole."

As the industry's first Star-level contributor to GCSAA's philanthropic division, The Environmental Institute for Golf, Toro has taken a leadership position in the turf management industry. Through providing funding for research and educational programs, Toro has further distinguished itself as an organization that's committed to superintendents and others involved in golf course management.

"Suppliers like Toro have ensured the continued success of the industry," adds Hughes. "By providing a wide variety of products and services, these key manufacturers continue to react to the specific needs golf course superintendents and owners."

Toro is the official Preferred Supplier of maintenance equipment and irrigation systems for the NGCOA, so members can take advantage of exclusive programs and offers on Toro equipment. Golf course owners have clearly recognized the need for enhanced productivity and better efficiency with turf management

equipment, which is exactly what Toro delivers.

"The Toro relationship offers our members more smart solutions," continues Hughes. "Providing support to both superintendents and owners will ultimately help



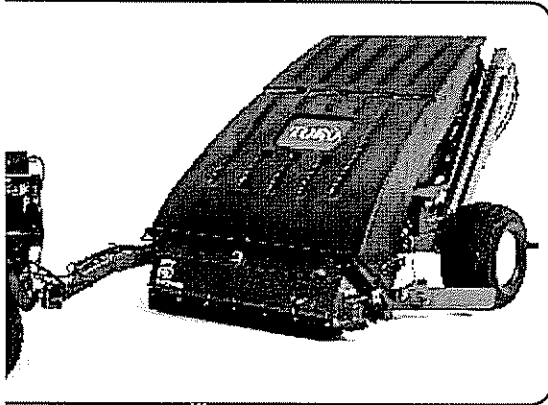
Mike Hughes, Executive Director, NGCOA

improve the operation and profitability of the golf courses they manage."

"Toro has a strong track record of support with GCSAA," Mona concludes. "We deeply value their industry support and dedication to our membership."

**TORO.** Count on it.

[www.toro.com](http://www.toro.com)



The ground following Toro® Pro Sweep™ 5200 makes cleaning up aeration cores and other debris more efficient.

## We Appreciate Your Feedback

If you have any questions, comments or suggestions, contact [toroadvantage@toro.com](mailto:toroadvantage@toro.com) or fax 952.887.8693. Send us your ideas for future topics or tell us what you think about this issue. We hope to hear from you soon.

Send Address Changes to:

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## Toro® Introduces Pro Sweep™ 5200 *The Faster, Easier Way To Clean Up Cores*

Your aeration program should include Toro's new Pro Sweep™ 5200, the unique turf sweeper that provides superior cleanup for pulled cores.

- Floating 52" wide sweeper head pivots to follow undulating terrain and deliver better core cleanup.
- Pro Sweep is easily towed by the Heavy Duty Toro® Workman® and is powered by the utility vehicle's high-flow hydraulics.
- All sweeping and dumping functions are conveniently operated by fingertip controls in the Workman operator area.
- Brushed-up cores are collected in a 25-cubic foot hopper.
- High-lift dump feature completely empties all swept-up cores.
- Pivoting sub-frame maintains positive tongue weight for better traction.
- Optional offset actuator lets operator switch from transport to collect position automatically.
- Optional windrow kit directs the cores away from the wheel to enhance clean up.
- Rubber flap on sweeper head prevents spilling of collected cores.
- Ideal for collecting leaves, twigs or other organic debris.

*For more information about Pro Sweep or any Toro products, contact your Toro distributor or call 1 800 803 8676.*

**TORO.**




**CERTIFICATE OF SERVICE**

The undersigned counsel certifies that, on August 30, 2005, he electronically filed the foregoing document with the Clerk of the Court using CM/ECF, which will send automatic notification of the filing to the following:

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The undersigned counsel further certifies that copies of the foregoing document were sent by electronic filing and by hand to the above local counsel and by email and first class mail to the following non-registered participants:

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